Dario Gjorgjevski

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Education

Ss. Cyril and Methodius University   2013-09-15/2018-01-30
Faculty of Computer Science and Engineering   Skopje, Macedonia
Computer Science and Engineering   Bachelor's degree
GPA of 10.00, on a scale from 5 (E/F) to 10 (A)

> Strong background in linear algebra, probability theory, statistics, operations research,
> and cryptography. Transcripts available upon request. Publications: [1, 2, 3].

Over 40 *Massive Open Online Courses* on topics related to game theory, probabilistic graphical models,
Bayesian statistics, combinatorics, programming language theory, mathematical optimization, etc.

Certifications available at /Personal/tree/master/Certifications.

Experience

Segment of One   2018-07-18/
Data Engineering   Berlin, Germany

- Modeling clients' business rules as *minimum-cost maximum-flow* problems.
- Developing internal ETL tools and processes; performing *change data capture* and *data vault modelling* for heterogeneous data sources.
- Scaling of feature calculation and predictive analytics to several terabytes of data inside a Vertica cluster.
- *Locality-sensitive hashing* via *MinHash signatures* for nearest neighbor search.

Infinite Analytics, Inc.   2017-11-20/2018-06-15
Data Science/Engineering   Skopje, Macedonia

- Scraping of clients' websites and product catalogs using Scala/Akka and Python/Scrapy.
- Dynamic configuration of upstreams with persistence across restarts in NGINX Plus.
- Acquisition, monitoring, analysis, and visualization of server utilization data.
- Behavior-driven development of a Scala/Apache Spark program to compute and visualize *customer insights* using over 2 billion facts about 50 million customers.

École polytechnique fédérale de Lausanne   2017-07-07/09-20
Laboratory for Communications and Applications   Lausanne, Switzerland
Research Internship
Supervisors: Jagdish Achara and prof. Jean-Yves Le Boudec

- Implementing software agents (`asyncio`) and network emulation (Mininet) in T-RECS, a *Software Testbed for Multi-Agent Real-Time Control of Electric Systems*.
- Time series modeling of smart grid power traces at a timescale of 20 ms using approaches based on wavelets and long-range dependence.
- Increasing the resolution of mean-aggregated data using deep learning for super-resolution.

Ss. Cyril and Methodius University   2016-10/2017-02
Faculty of Computer Science and Engineering   Skopje, Macedonia
Computer Laboratory Assistantship

Full responsibility for conducting computational exercises and homework assignments in:

Linear Algebra	Least squares, linear codes, and low-rank approximations with Mathematica® and SageMath.
Probability and Statistics	Data visualization, Monte Carlo methods, statistical inference, hypothesis testing, and linear regression with R.
Databases	ER modeling, relational algebra, and ANSI SQL.

École polytechnique fédérale de Lausanne   2016-06-15/09-15
Security and Cryptography Laboratory   Lausanne, Switzerland
Research Internship
Supervisors: Sonia Bogos and prof. Serge Vaudenay

Studying and improving upon the complexity of state-of-the-art solving algorithms for the *Learning With Errors* (LWE) problem.

Honors and Achievements

- Best student paper at the 14th International Conference on Informatics and Information Technologies held on April 7–9, 2017 in Hotel Bistra, Mavrovo, Macedonia.

- Scholarships to attend the 2016 and 2017 editions of the Summer School on Real-World Crypto and Privacy held in Šibenik, Croatia.

- Dean's list at the Faculty for Computer Science and Engineering.

- Merit-based scholarships from the Faculty of Computer Science and Engineering, the Ministry of Education and Science of Macedonia, and the Municipality of Delčevo.

Skills

Programming and Computation

Proficient with	– Python	– NumPy, SciPy, Pandas, scikit-learn, Keras, Scrapy, NetworkX.
	R	– `data.table`, `Tidyverse`, mlr, caret, interfaces to JAGS and Stan.
		Packages for time series analysis, network analysis, text mining.
	SQL	– Vertica, Postgres, Redshift.
	Shell	– sh, Bash, Zsh.
	CAS	– Mathematica®, SAGEMATH.
	(D)VCS	– Git.
Familiar with	– Scala, C, C++, Java.	
Academic exposure to – various Lisps, Haskell, Standard ML.		

Document Preparation

- (LA)TEX, Jupyter, Sweave/knitr, Wolfram Notebooks.

- Matplotlib, `ggplot2`, Ti*k*Z/PGF, PSTricks, gnuplot, Graphviz.

Publications

[1] **Dario Gjorgjevski**. "Combining LWE-Solving Algorithms". In: *Proceedings of the 14th International Conference on Informatics and Information Technologies* (Hotel Bistra, Mavrovo, Macedonia, Apr. 7–9, 2017). Ed. by Aleksandra Popovska–Mitrovikj, Biljana Tojtovska, and Kire Trivodaliev. 2017, pp. 165–170. ISBN: 978-608-4699-07-1. eprint: http://ciit.finki.ukim.mk/data/papers/CIIT2017.pdf.

[2] **Dario Gjorgjevski**. "Error-Correcting Codes in the Rank Metric". With Applications to Cryptography. Bachelor's Thesis. Under sup. of Simona Samardjiska. Ss. Cyril and Methodius University, Jan. 24, 2018.

[3] **Dario Gjorgjevski** and Dejan Gjorgjevikj. "Using Distributed Representations to Identify Genders and Age Groups of Twitter Users". In: *Proceedings of the 15th International Conference on Informatics and Information Technologies* (Hotel Bistra, Mavrovo, Macedonia, Apr. 20–22, 2018). Ed. by Nataša Ilievska and Georgina Mirčeva. 2018. To be published.